TIMELINEZ

SPECIAL CONTEST ISSUE

SAN FRANCISCO / BAY AREA TIMEX / SINCLAIR USERS

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**********TIMEX NEWS**********

THE T/S 2000 SERIES HAS GONE THROUGH MORE CHANGES THAT WILL GIVE THEM MORE FEATURES WHEN THEY WILL COME OUT (PROBABLY AROUND THANKSGIVING). INSTEAD OF A MAXIMUM OF 48K OF MEMORY THE TOP MODEL WILL COME WITH 72K. IT CAN BE UPGRADED TO 264K WITH PLUG-IN CARTRIDGES. THE STANDARD SCREEN DISPLAY WILL BE 32*24, BUT A 64*24 SCREEN IS POSSIBLE IN >FULL SCREEN MODE<. THIS MODE WILL REQUIRE ANOTHER PLUG-IN MODULE AND WILL ALSO REQUIRE USE OF A MONITOR. THE PURPOSE OF THESE CHANGES IS TO COUNTER COMPETITION FROM COMMODOE 64 IN MEMORY CLAIMS AND TO GIVE THE 2000*S A WORD PROCESSING CAPABILITY.

A RATHER RELIABLE SOURCE HAS INFORMED THE EDITORS THAT THE RELEASE DATES IN THE S.F. AREA ARE: 1500 8/15, 2000/S 9/15.

HARDWARE/SOFTWARE REVIEWS

EXATRON STRINGY FLOPPY WITH INTERFACE
HUNTER 2K-8K NONVOLATILE MEMORY BOARD
Z-XLR8 FAST LOAD PROGRAM

I/VE HAD THE RARE OPPORTUNIY TO USE TWO SYSTEMS THAT DEAL WITH THE TIMEX 1000/SINCLAIR ZX81/S MAJOR SHORTCOMING - THE UNCOMFORTABLY LONG SAVING AND LOADING TIME. EACH SYSTEM OFFERS ADDITIONAL USER FUNCTIONS BEYOND FAST LOADS AND SHOULD BE CAREFULLY SELECTED BEFORE MONEY IS INVOLVED - THERE IS EASILY $50 THAT SEPARATES THE TOTAL COSTS OF EACH.

THE HUNTER NONVOLATILE RAM BOARD COMES AS EITHER A KIT OR PRE-ASSEMBLED AVAILABLE THROUGH MAIL-ORDER. I PURCHASED THE 2K KIT FOR $32.10 DELIVERED TO MY DOOR. THE ASSEMBLY INSTRUCTIONS WERE EASY TO FOLLOW. QUALITY OF MATERIALS AND ENGINEERING WAS EXCELLENT(PLATED THROUGH BOARDS ON THE CIRCUIT BOARD). AFTER FOUR HOURS OF CAREFUL WORK THE BOARD PASSED ALL TESTS WITH THE INITIAL POWER-UP. I LOCATED THE MEMORY IN THE 8K TO 16K BLANK

CONTINUED ON PAGE 3

TELL TIMEX CONTEST

Did you ever wish you could tell someone at Timex about a great idea for promoting interest in their family of computer products? Did you ever want to suggest that Timex come out with a new hardware or software item? Did you ever want to offer some constructive criticism? Well this is your chance to convey those ideas, suggestions and criticisms directly to Timex and you might even win a prize in the process.

In order to promote communication between Timex and User Group members, TIMELINEZ is happy to announce the "Tell Timex Contest". Sam Barron and Sue Mahoney have agreed to examine all the enteries and award prizes to the most beneficial suggestions. Sam is our own local Timex representative and Sue is the Manager of Technical Support Services for Timex.

All you have to do to enter is to decide what you would like to tell Timex and then send your entry to the following address:

TIMELINEZ
TELL TIMEX CONTEST
P.O. BOX 1312
PACIFICA, CA. 94044

The contest will end July 31, and all enteries become the property of Timex and TIMELINEZ. Ten winners will each get a Timex software tape of their choice, and two grand prize winners will receive five software tapes. We will also print the best ideas, suggestions and criticisms in upcoming issues of TIMELINEZ.

Good luck, we are waiting to hear from you.

64K BYTE MEMORY EPANSION FOR

THE T/S 1000

A 64K RAM for the T/S 1000 allows much larger programs to be run than can be with the 16K RAM pak. It should also operate properly on the ZX81 and T/S 1500. The design presented here also allows the 8K ROM to be copied to RAM. This allows patching of the operating system to perform specialized functions such as higher resolution graphics, alternate keyboard input, different printers, extension to the Sinclair Basic such as single step of basic programs, breakpoint, trace, etc.

The 64K RAM's have a power supply advantage over the 16K RAM's in that only a single voltage supply is needed(+5v) instead of three (+5,+12,-5). The ram controls (ras,cas) operate from the Z80 clocks and do not use any R-C time delays. This makes the circuit more immune to trouble caused by part variations. Decoding is provided for enabling the 64K RAM in 8K blocks. This allows the addition of other devices into the address space such as ROM or memory mapped I/O. If the third 8K block is disabled(opened) the T/S 1000 reverts to the internal 2K RAM.

The timing diagram shows the relationship between RAS and CAS. RAS is driven directly by MREQ. CAS is delayed until the falling clock edge after RD. This allows the LO 8 bits of the row address to be latched. Then the 8 column address bits are presented and latched. Refresh occurs from the Z80 with row address strobe(RAS) only.

Parts placement should be close but exact placement is not critical. An example is shown. All the device grounds need to be tied together using a ground plane or heavy bus wire.

A minimum of 3-4 .01uf +5V to ground bypass capicators should be distributed among the devices. One 20-50uf bulk decoupling capacitor should be connected from +5V to ground. The RAM board ground needs to be connected to the T/S 1000 expansion connector ground using multiple wires to minimize noise. The RAM board should be less than 5 inches from the expansion connector. Note that the RAM power pins are reversed.

There is one special consideration related to using the upper 32K. Any Basic program including variables will work but any USR assembly language routines need to be in the lower 32K. This is caused by the special operations used by the T/S 1000 to refresh the TV screen display. If the TV display is not used by running another operating system other than Sinclair Basic then the M1 jumper shown on the schematic can be opened to allow unrestricted Z80 execution.

Terry Trigg

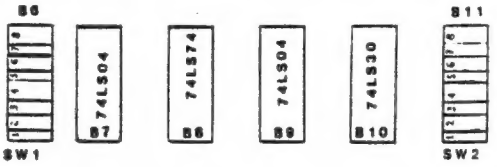
LOCAL USER GROUP MEETINGS

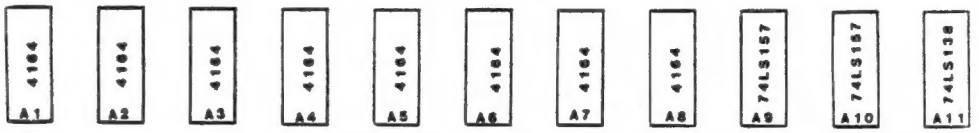
EBZUG	BERKELEY	3RD THURS.
PUG	BURLINGAME	3RD SUN.
SBAZUG	SANTA CLARA	LAST TUES.

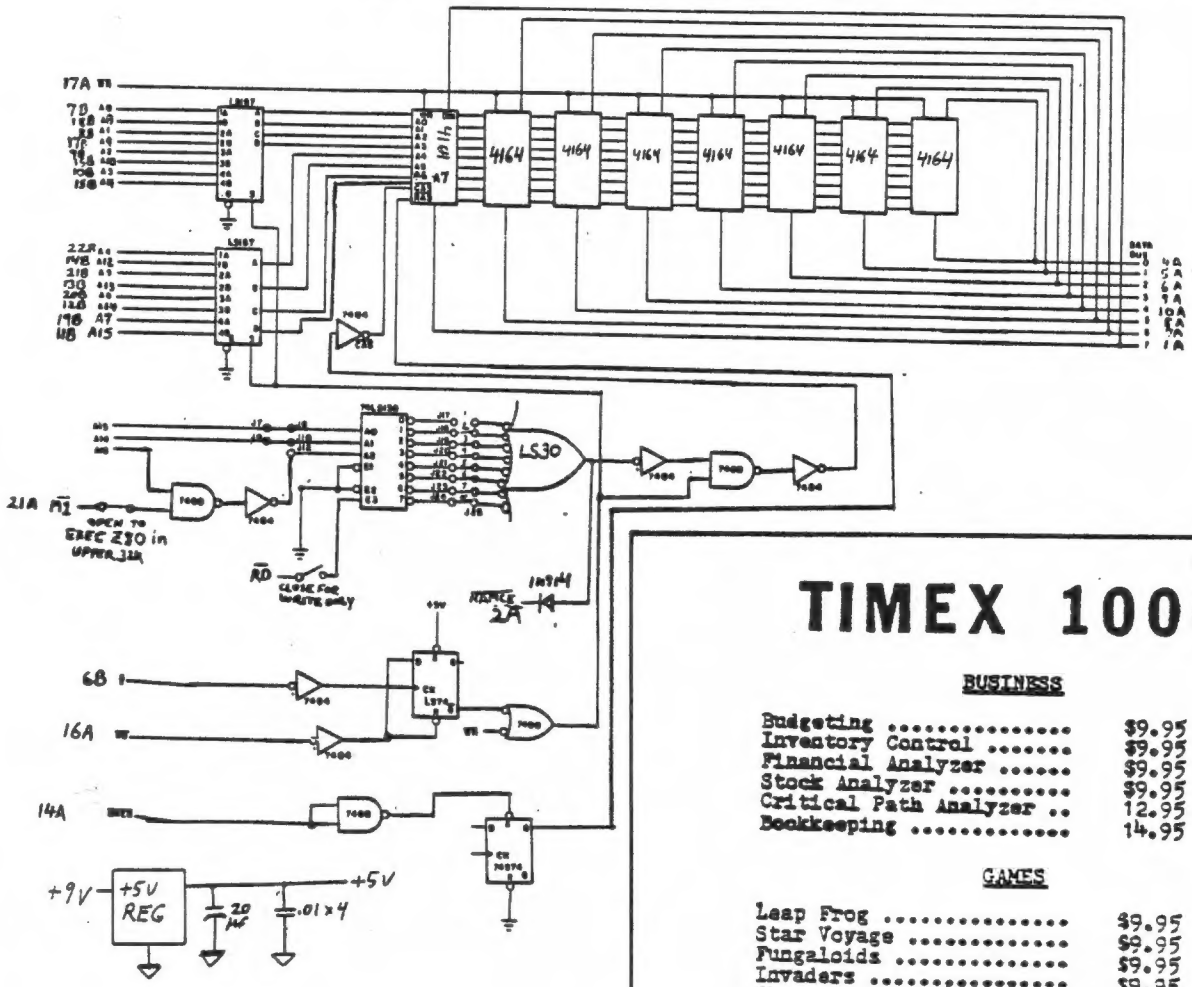
NOTES:
1. ALL TTL IC/S ARE LOW POWER SHOTTKY(LS).
2. RAM/S ARE 250NS ACCESS.
3. PART/S 8-4164, 2-74LS157, 1-74LS00, 1-74LS04, 1-IN914, DIPSWITCHES, +5V REG.

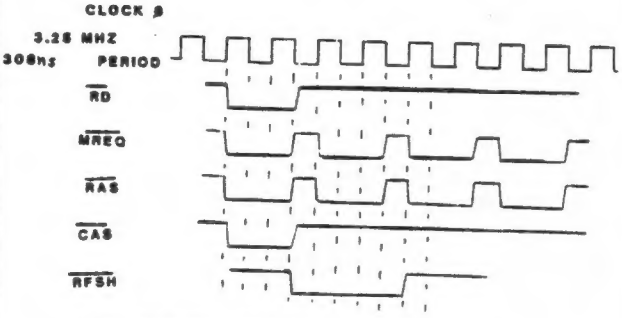
T. TRIGG
6-1-83

64K MEMORY BOARD LAYOUT









64K MEMORY TIMING DIAGRAM

ROUNDING OFF TO 2 DECIMAL PLACES FOR FINANCIAL PROGRAMS

****

HAVE YOU EVER WORKED ON A PROGRAM THAT INVOLVED MONEY AND COME UP WITH AN ANSWER LIKE $74.5875 (WHICH IS 12.75 0/0 OF OF $585). WHILE THIS MAY BE ACCURATE IT IS NOT THE WE ARE USED TO SEEING MONEY EXPRESSED AND IT MAKES YOUR FINANCIAL PROGRAMS SEEM SLOPPY. WE CAN DEAL WITH THE PROBLEM IN 2 WAYS: 1)WE CAN CHOP OFF THE DECIMAL PLACES AFTER THE SECOND, OR 2)WE CAN "ROUND OFF" TO 2 DECIMAL PLACES.

FIGURE 1 SHOWS THE "CHOP OFF" PROGRAM THAT MAKES USE OF THE INT FUNCTION IN SINCLAIR BASIC:

FIGURE 1

```
 10 LET A=74.5875
 15 PRINT "$";A
 20 GOSUB 500
 30 PRINT "$";A
 50 STOP
500 LET B=INT A
510 LET C=A-B
520 LET C=C*100
530 LET C=(INT C)/100
540 LET A=B+C
550 RETURN
```

IN LINE 500 WE ISOLATE THE WHOLE NUMBER PORTION OF A. LINE 510 ISOLATES THE DECIMAL PORTION AND IN 520 WE MAKE THE FIRST 2 DECIMAL PLACES A WHOLE NUMBER BY MULTIPLYING BY 100. WE ELIMINATE THE REMAINING DECIMAL PLACES WITH THE INT FUNCTION IN 530 AND "RE-DECIMALIZE" THE FIRST 2 DECIMAL PLACES BY DIVIDING BY 100. LINE 540 PUTS THE WHOLE NUMBER (B) AND DECIMAL (C) PORTONS OF THE NUMBER BACK TOGETHER. LINES 500 TO 540 CAN BE REPLACED WITH:

```
510 LET A=(INT ((A-INT A)*100)/100)+INT A
```

THE PROGRAM CONVERTS $74.5875 TO $75.58 WHICH LOOKS BETTER,BUT IS NOT ACCURATE. SO LET US ADD A "ROUND OFF" FUNCTION TO THE PROGRAM WHICH WILL ADD .01 TO THE ANSWER IF THE THIRD DECIMAL PLACE IS 5 OR GREATER (LINES 520 AND 530 IN FIGURE 3):

FIGURE 3

```
 10 INPUT A
 15 PRINT "$";A
 20 GOSUB 500
 30 PRINT "$";A
 50 GOTO 10
500 LET C=A
510 LET A=(INT ((A-INT A)*100)/100)+INT A
520 LET D=C-A
530 IF D>=.005 THEN LET A=A+.01
550 RETURN
```

IN THE PROGRAM IN FIGURE 3 YOU INPUT A NUMBER (WITH 3 OR MORE DECIMAL PLACES) AND THE NUMBER IS ROUNDED OFF TO 2 DECIMAL PLACES. IT IS A MORE ACCURATE ANSWER. THERE ARE A NUMBER OF DIFFERENT RULES FOR ROUNDING OFF. IF YOU UNDERSTAND THE PROGRAMS YOU CAN EASILY ADAPT YOUR OWN FAVORITE.

JOEL BRODY

INKEY$

PROGRAM CONTROL

****

THE INKEY$ ROUTINE CAN BE USED IN MANY DIFFERENT WAYS TO ENHANCE A PROGRAM OR MAKE IT RUN SMOOTHER.

FOR EXAMPLE, IF AN INDEFINITE PAUSE IS NEEDED, USE THE FOLLOWING INSTRUCTIONS.

```
5 LET A$= INKEY$

10 IF INKEY$="" THEN GOTO 10
```

THE PROGRAM WILL PAUSE AND NOT CONTINUE UNTIL A KEY, ANY KEY, IS PRESSED. "PAUSE" COULD BE USED BUT IT CAUSES THE SCREEN TO JUMP WHEN IT IS EXECUTED.

IN MANY PROGRAMS, INPUT FROM THE USER IS CRITICAL. IT MUST BE THE CORRECT TYPE OF INPUT OR THE PROGRAM MAY CRASH OR GIVE INCORRECT ANSWERS. IN THIS CASE YOU WILL WANT THE INKEY$ FUNCTION TO LOOK FOR CERTAIN TYPES OF INPUT AND REJECT ALL OTHERS. EXAMPLE:

YOU WANT THE PROGRAM TO ACCEPT ONLY THE NUMBERS FROM 1 TO 5 AND NO OTHERS. THUS:

```
90 PRINT "ENTER 1 THRU 5"

100 LET A$= INKEY$

110 IF A$<"1" OR A$>"5"

110 IF A$<"1" OR A$>"5" THEN GOTO 100

120 PRINT "YOU PRESSED ";A$
```

TYPE IN THIS PROGRAM AND RUN IT AND YOU WILL SEE THAT IT WILL ONLY ACCEPT THE NUMBERS FROM 1 TO 5 AND NO OTHERS. SINGLE LETTERS OR WHOLE WORDS CAN BE CHECKED IN THIS MANNER.

BY NEIL STECKLEY

TIMELINE

AS THE ZX81 AND TS1000 COMPUTERS GROW IN POPULARITY, THE DIVERSITY OF ADD-ONS ALSO INCREASES. ONE SUCH DEVICE IS THE ZXTALKER. THE ZXTALKER IS MADE BY A SMALL COMPANY IN THE SOUTH BAY CALLED USER FRIENDLY RESEARCH.

THE ZXTALKER IS A VOICE SYNTHESIZER AD-ON FOR YOUR ZX81 OR TS1000. IT PRODUCES SPEECH BY WAY OF CHAINING TOGETHER PHONEMES (THE BUILDING BLOCK SOUNDS OF SPEECH). THE ZXTALKER IS MAPPED AS THOUGH IT WERE A MEMORY LOCATION. PRODUCING SPEECH IS AS SIMPLE AS POKING PHONEME CODES TO THAT ADDRESS.

THE ZXTALKER IS CAPABLE OF MAKING 61 PHONEME SOUNDS AND 2 DIFFERENT PAUSES THAT, IN COMBINATION, CAN PRODUCE JUST ABOUT ANY WORD IN ANY EUROPEAN BASED LANGUAGE. SOME EUROPEAN AND MOST ORIENTAL LANGUAGES HAVE SOME UNIQUE SOUNDS THAT THE ZXTALKER CANNOT PRODUCE. SINCE THE LENGTH OF THE SHORTEST PHONEME IS 47 MILLISECONDS, THE ZXTALKER CAN BE ADEQUATELY OPERATED WITH BASIC PROGRAMMING IN THE SLOW MODE. ANY PROGRAMMING TECHNIQUE THAT SENDS A CONTINUOUS SERIES OF BYTES TO THE ZXTALKER CAN BE USED. THE RATE OF THE SERIES IS APPROXIMATELY 10 BYTES PER SECOND. THE NUMBER OF WORDS THAT CAN BE CONSTRUCTED IS LIMITED ONLY BY MEMORY SPACE AND YOUR IMAGINATION.

THE ZXTALKER IS CONNECTED TO YOUR ZX81 BY WAY OF A "PIGGYBACK" CONNECTOR THAT ALLOWS ADDITION OF MEMORY MODULES OR OTHER AD-ONS SIMULTANEOUSLY. THE USER ALSO HAS ACCESS TO THE FREQUENCY CONTROL AND THE VOLUME CONTROL.

TO GET MORE INFORMATION ABOUT THE ZXTALKER, CONTACT:
USER FRIENDLY RESEARCH
478 W. HAMILTON AVE. SUITE 154
CAMPBELL, CALIFORNIA 95008

Leland Harker

TACTILE FEEDBACK FOR A DIME

The major problem with the Sinclair keyboard is that your fingers have no reference point, so you can't tell without looking at the keyboard which key you are pressing. Putting a small drop of clear epoxy glue in the center of each key gives your fingers points of reference. You can also put extra drops of glue in the corners of important keys, such as the "home"keys F and J, to help you to position your hands properly.

Mix the epoxy glue according to the directions on the package. If you are using five-minute epoxy you should mix only a very small batch, because the glue may set before you are done applying it. When the glue gets tacky, mix and use another batch.

Apply a small drop of glue in the middle of each key with a toothpick. The drop will flatten slightly while setting.

Even if you are using five-minute epoxy, let the glue on your keyboard set for five or six hours before using your computer, since it takes that long for the glue to get completely hard.

--Henry Polard

LEARNING Z80 ASSEMBLY LANGUAGE PROGRAMMING

PART 2

In the last article we learned about the registers in the Z80 and a little bit of math, now we will enter a basic program * that will enable us to enter machine code.

```
 1 REM ( ENTER 254 CHARACTERS HERE )
10 PRINT "WRITE TO  ";
20 INPUT A$
30 PRINT A$
40 GOSUB 200
50 PRINT
60 LET A$=""
70 IF A$="" THEN INPUT A$
80 IF A$="S" THEN STOP
90 IF CODE A$=25 THEN GOTO 300
100 PRINT A$( TO 2);"  ";
110 POKE X,16 * CODE A$ + CODE A$(2)-476
120 LET X=X+1
130 LET A$=A$(3 TO )
140 GOTO 70
200 LET X=4096 * CODE A$ + 256 * CODE A$(2) + 16* CODE A$(3) + CODE A$(4)
- 122332
210 RETURN
300 LET A$=A$(2 TO )
310 PRINT ".";A$(1);"  ";
320 POKE X,CODE A$
330 IF CODE A$=216 THEN POKE
    X,118
340 LET A$=A$(2 TO )
350 LET X=X+1
360 IF CODE A$<>25 THEN GOTO 310
370 LET A$=A$(2 TO )
380 GOTO 70
```

* -- (From Toni Bakers book "Mastering Machine Code on Your ZX81")

When prompted to write address,type "4082" which is hex for 16514 decimal.this is the address of the first character after 1 REM .REM statements are excellent places to store machine code.They are not executed by basic , and are easily saved.Then enter the hexadecimal listing in the program that follows:

Our first assembly language program will enable us to print a message on the screen.Of course this could be easily done in basic,but this simple program can show a few of the principles needed to write a succesful machine code program.

```
**************************************************************************************
hex code      label  mnemonic  operand
21 96 40      PRMESG    LD      HL,MESG
```

The name in the label field PRMESG,is an assembler name for the address of this instruction.Any time you use a label,the assembler remembers the address and you can then jump (goto) or call (gosub) to the label.The mnemonic "LD"and the operand "HL,MESG",places the address named by the label "MESG" (found later in the program) into the 16-bit register HL.

```
ED 58 0C 40             LD      DE,(400C)
```

This instruction loads the register pair DE with the CONTENTS of the address at 400C hex.In assembly language the address in the parenthesis stands for the contents of the address enclosed in the parenthesis."400C" hex is the system variable used by the T/S1000 to hold the address of the display file.The reason

the location is held in a variable is that the display file (d-file) changes locations as your program increases or decreases in size. The display file is the block of memory that the computer displays on the screen.

```
13                      INC     DE
```

This instruction adds 1 to the number in the DE pair.It is required when dealing with the D-FILE.The first byte of the D-FILE is 76 hex.This is a marker that tells the computer where the D-FILE starts.If this byte is overwritten the computer will not know where it begins,and cause a nasty crash.

```
01 00 03                LD      BC,0300
```

This is the byte counter for the loop that is the main processing part of this program.Loops in assembly language as in basic must first be initialized with variables.The 16-bit number 300 hex,is the actual number of usable ,or viewable bytes in the D-FILE.After each line on the screen,there is another 76 hex which tells the computer to make a newline.There are 319 hex (793 dec) bytes in the D-FILE,but only 300 hex (768 dec) are seen on the screen.

```
7e              AGAIN   LD      A,(HL)
```

This is the actual beginning of the processing loop.It's address is named AGAIN.This address will be used by the program to return to if the processing is not complete.The instruction LD A,(HL) loads the accumulator (A) with the CONTENTS of the address pointed to by the HL register pair.This is one of the best methods of testing addresses.

```
fe ff                   CP      FF
```

this instruction compares the accumulator with the 8-bit data "FF".The COMPARE instruction subtracts the data in the operand field from the accumulator.It does not change the accumulator,but changes the flags according to the results of the subtraction.In this case we are using "CP" to find the end of data marker "FF" which will be placed after the message.The instruction sets up a condition in the flags that can be used to jump or call or,as in the next instruction,return to basic.

```
c8                      RET     Z
```

This is the conditional branch set up by the previous 2 instructions.This is needed to test the data and see if the task is finished.

```
ED A0                   LDI
```

Now we get to the heart of the matter.This is the instruction that does the work of the program.LDI means load with increment,and it does a few things in one instruction,namely it transfers data from a source (address in HL) to a destination (address in DE),then increment HL and DE and decrement BC.As you can see this instruction does a lot and is therefore very powerful.

```
C3 8D 40                JP      AGAIN
```

Goto AGAIN until "FF" is found

```
                MESG    "YOUR MESSAGE WILL BE PLACED HERE"76
                        "FOR NOW DO NOT MAKE ANY ONE"76
                        "LINE LONGER THAN 32 CHARACTERS"76 FF
```

TO enter a message under the basic program use this format :";your message will be placed here;76"

You may enter a 76 anywhere and it will give you a new line.Be sure that you have included an "FF" or it will be bye-bye.SAVE the program BEFORE running it so you will not have wasted your time.

To run it type RAND USR 16514 with a line number or in immediate mode.

F.J.M
7/3/83

CONTINUED FROM PAGE 1

ROM REGION (JUMPER SELECTABLE) TO PROTECT ALL PROGRAMS FROM BEING ERASED BY NEW COMMANDS.

THE FIRST USE I MADE OF MY HUNTER BOARD WAS AS STORAGE FOR Z-XLR8, A FAST LOAD PROGRAM BY ADVANCED INTERFACE DESIGNS P.O. BOX 1350 STATE COLLEGE, PA. 16801 ($10). Z-XLR8 OCCUPIES 2K RAM AND IS USER LOCATABLE AT ANY RAM ADDRESS. WITH Z-XLR8 I CAN NOW LOAD MAZOGS IN LESS THAN 60 SECONDS. I DID HAVE TO USE TDK D50 TAPE TO HANDLE THE DENSE PACKED SIGNAL. THE OPERATING SYSTEM CONSISTS OF ONE LINE PHRASES AT THE BOTTOM OF THE SCREEN PROMPTING YOU TO INPUT THE CORRECT LETTER CODES, SUCH AS:

INPUT FILE NAME
MAZOGS

AFTER WHICH YOU PRESS ENTER TO GET:

INPUT COMMAND
PS

PRESS ENTER AGAIN:

START TAPE

FOLLOWED BY:

STOP TAPE

WHEN THE PROGRAM IS FINISHED BEING SAVED. YOU HAVE ELEVEN SYSTEM COMMANDS TO CHOOSE FROM INCLUDING AN INDEX LOAD TO TELL YOU WHATS ON EACH TAPE.

THE EXATRON STRINGY FLOPPY WITH TIMEX INTERFACE WAS MADE AVAILABLE TO ME AS AN EXPERIMENTAL UNIT. A SIMILAR UNIT WITH A DIFFERENT OPERATING SYSTEM WAS AVAILABLE FROM CAT FOR AROUND $130. A LIMITED NUMBER FROM EXATRON WITH THE TIMEX INTERFACE MIGHT BECOME AVAILABLE FOR AROUND $150. EVEN THOUGH YOU MAY NOT BE ABLE TO EASILY PURCHASE THIS DRIVE AND OPERATING SYSTEM, IT IS WELL WORTH DISCUSSING. PLANS AS TO ITS FUTURE ARE STILL UNKNOWN.

THE INTERFACE, WHICH IS CAPABLE OF CONTROLLING FOUR DRIVES, IS CASED IN A MEMOTECH STYLE CASE. IT CONTAINS A 4K EPROM THAT CONTAINS THE OPERATING SYSTEM. DEPENDING ON THE AMOUNT OF RAM YOU HAVE AVAILABLE AND THE TYPE OF PROGRAM YOU WISH TO SAVE YOU MAY CHOOSE FROM THE FULL SYSTEM OR AN ECONOMY VERSION THAT DOES NOT OCCUPY RAM TOP. IF YOU HAVE ONLY 16K RAM AS I DO THEN YOU END UP USING THE ECONOMY MODE FOR ALL LONG PROGRAMS AND ANY THAT HAVE MACHINE CODE SUPPORT ABOVE RAMTOP. A CLEARLY WRITTEN USERS GUIDE HELPS EXPLAIN THIS.

TO SAVE A PROGRAM YOU TYPE IT IN OR LOAD IT FROM TAPE. THEN YOU ENTER AS A DIRECT COMMAND:

PRINT USR 12345

FOR THE FULL OPERATING SYSTEM OR

PRINT USR 12348

FOR THE ECONOMY MODE. HERE IS WHAT THE MENUS LOOK LIKE:

EXATRON STRINGY FLOPPY
OPERATING SYSTEM

1. GET WAFER DIRECTORY
2. LOAD PROGRAM
3. SAVE BASIC PROGRAM
4. INITIALIZE WAFER
5. RETURN TO BASIC
6. LOAD BY NUMBER
7. SAVE MACHINE PROGRAM
8. SELECT DRIVE
9. COPY WAFERS

SELECT?5

ECONOMY MODE

1. SAVE PROGRAM
2. LOAD PROGRAM
3. RETURN TO BASIC
4. CERTIFY

SELECT?

LOADING TIMES FOR THE FULL SYSTEM CAN BE LONGER THAN THE ECONOMY BECAUSE OF DIFFERENCES IN EACH SYSTEM, THE LONGEST TIME IT HAS TAKEN FOR ME TO LOAD A 15K PROGRAM ON EITHER IS 27 SECONDS. (I HAVE LOADED VU-FILE IN 9 SECONDS IN ECONOMY MODE).

I HOPE TO SEE EXATRON GO INTO FULL PRODUCTION WITH THIS OPERATING SYSTEM.

EBZUG NEWS

I'D LIKE TO THANK THE MEMBERS OF EBZUG FOR THE "HONOR" OF BEING CHOSEN AS THEIR NEW PRESIDENT. I'M SURE WE ALL LOOK FORWARD TO ANOTHER YEAR OF HIGH-POWERED COMPUTING. LET'S HOPE TIMEX'S 2000 SERIES IS SUCCESSFULLY INTRODUCED AND UNCLE CLIVES LOW COST COMPUTER REVOLUTION CONTINUES. WE'D ALL LIKE TO THANK JIM MARCH FOR THE FINE JOB HE DID AS OUR FIRST PRESIDENT AND WE HOPE HE HAS MORE TIME TO ENJOY HIS MACHINE NOW THAT HE DOESN'T HAVE ALL OF THIS RESPONSIBILITY.

>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<
>>>>>>> JULY 21ST MEETING <<<<<<<
>>>>>>>>>>>>>>>>>>>><<<<<<<<<<<<<<<<<<<<

PLEASE BRING YOUR COMPUTERS AND/OR YOUR TV'S. WE'VE BEEN SHORT OF HARDWARE THE LAST FEW MEETINGS AND HAVEN'T BEEN ABLE TO ADEQUATELY DISPLAY SOFTWARE AND PERIPHERALS THAT HAVE BEEN BROUGHT.

++++++++++++++++++++++++++++++++

WE'D LIKE TO START OFF THE NEXT MEETING WITH A BRIEF SURVEY AND DISCUSSION ON WHAT WE USE OUR COMPUTERS FOR. MANY "EXPERTS" CLAIM THE T/S 1000 IS ONLY GOOD FOR LEARNING COMPUTING. IT CERTAINLY HAS MORE CAPABILITIES THAN THAT. THE PROOF OF THE VALUE OF THE MACHINE IS IN DOCUMENTING ITS ACTUAL USES. SHARE YOUR USES OF THE T/S FOR GAMES, PROGRAMMING AND HOME AMD BUSINESS UTILITY. WE HOPE TO PUBLISH THE RANGE OF USES HERE.

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ERIC REITER'S COMPUTER CONTINUUM CONTINUES TO EXPLOIT THE EXPANSION CAPABILITIES OFTHE T/S1000. EIC WILL DEMONSTRATE CC'S NEW PRODUCT, ONE EPROM THAT CONTAINS A PROGRAM FOR A DIGITAL OSCILLOSCOPE, SECTRAL ANALYZER AND HIRES PRINTER GRAPHICS. HE MAY ALSO BRING ALONG A EPROM-BASED FORTH ADAPTION FOR THE T/S.

++++++++++++++++++++++++++++++++
+++++HELP BUILD OUR LIBRARY+++++
++++++++++++++++++++++++++++++++

SHARE ANY INTERESTING PROGRAM YOU MAY HAVE WRITTEN OR PUBLIC DOMAIN SOFTWARE THAT YOU'VE GOTTEN FROM BOOKS AND MAGAZINES. HENRY POLLARD IS HANDLING THE LIBRARY AND WILL BE HAPPY TO ACCEPT YOUR CONTRIBUTION.

JOEL BRODY

SCIENCE AND ENGINEERING PROGRAMS FOR THE TIMEX/SINLAIR 1000 by Cass Lewart. A Byte Book. Microtext/McGraw-Hill. $13.95.

This book includes 25 programs that range from calculating the characteristic impedance of electrical transmission lines tosolutions of queing equations. The programs are presented with a description of the problems they solve, instructions for using the programs, print-outs of program runs, discussions of the programs' results, and programming remarks. The book concludes with some programming hints and instructions for convertiong the two programs that won't do so to run on the Spectrum. Amazingly, the programs in this book are written for 2K! Still, they incorporate "user-friendly" devices such as data-type checks. This book is a MUST for theose interested in science and engineering.

-- Henry Polard

EBZUG 83

EAST BAY TIMEX/SINCLAIR USERS

WE ARE A NON-PROFIT NEWSLETTER SERVING USERS IN THE SAN FRANCISCO - OAKLAND BAY AREA.

PRESIDENT JOEL BRODY
TREASURER WOODY MCPHEETERS
EDITOR RICK LINK VICE PRES.
STAFF JOEL BRODY, WOODY MCPHEETERS, H. POLLARD

PLEASE SEND ALL ARTICLES, ADVERTISEMENTS, AND QUESTIONS BY THE FIRST THURSDAY OF THE MONTH TO: EBZUG
854 40TH ST.
RICHMOND, CA
94805

NEXT MEETING THURSDAY JULY 21

MEETING STARTS AT 7:30 PM

ONCE AGAIN OUR MEETING TIME HAS BEEN INCORRECTLY PRINTED IN THE COMPUTER CLASSIFIEDS. PLAN ON MEETING AT THE WEST BRANCH LIBRARY ON THE 21ST FOR OUR FORMAL MEETING AND ON THE 28TH TO WELCOME NEW MEMBERS.

The following reprint from THE WALL STREET JOURNAL brings us up-to-date on the adventures of Clive Sinclair, the inventor of the Timex/Sinclair computer.

British Electronics Wiz, Clive Sinclair, Turns Efforts to Developing Electric Car

By David Brand
Staff Reporter of The Wall Street Journal

LONDON—Sir Clive Sinclair, the British electronics wizard who has pioneered products from home computers to pocket television sets, has turned his hand to electric cars.

Despite many tries over the years by many companies, no one has developed a mass-produced electric car, so the odds are against the recently knighted Sir Clive.

But Sir Clive, at age 42 one of Britain's best-known and wealthiest entrepreneurs, isn't just another weekend hobbyist who enjoys tinkering in his garage. The digital watches, calculators and microcomputers made by his company, Sinclair Research Ltd., have consistently sold for less than even the Japanese competition.

The tiny, two-inch-screen Sinclair pocket TV set, which will be launched on the British market this year, is expected to sell for only half the price of its rival from Sony Corp. of Japan, which retails in Britain for the equivalent of about $300.

Look at De Lorean Plant

The electric car is, of course, far more complicated, but one indication that Sir Clive appears serious is that he personally purchased an option to acquire a major portion of the defunct De Lorean Motor Co.'s automobile assembly plant in West Belfast, Northern Ireland.

Sinclair Research said Sir Clive is interested in buying the plant for its medium-volume composite plastics facility, which would be needed if the inventor decides to build the small, battery-powered car that he has been developing for a decade.

Sinclair cautioned that "no early utilization of the plant is anticipated." The company said that since February, Sir Clive has been discussing the use of the plant with the Industrial Development Board of Northern Ireland. The talks are expected to continue for several months.

The Sinclair car is in the prototype stage and, according to a company spokesman, a prototype could be shown as early as 1985. The so-called Sinclair Vehicle Project has been led since March by Barrie Wills, who was managing director of the De Lorean West Belfast plant.

Sinclair officials won't disclose any technical details about the electric car, but according to Engineer, a British magazine, the car will be powered by a new type of lead-acid battery that will be both low-cost and capable of being constantly recharged.

The biggest obstacle to developing a marketable electric car has been finding an economical battery that could be recharged many times before replacement. In addition, such a battery would have to be compact and light enough for a small vehicle and would require a simple, inexpensive charging system.

GM Project

Sinclair isn't discussing how it might succeed in mass producing an electric car when so many others have failed. Of the major U.S. auto makers, only General Motors Corp. has seriously considered producing an electric car in recent years. In the fuel shortage that followed the 1979 Iranian revolution, the project seemed to gain urgency, and GM even talked of selling such a car in the mid-1980s. But as fuel supplies grew, interest in the project waned, and GM shelved its project a couple of years ago.

Sinclair officials refused to discuss Sir Clive's project and commented only that the Engineer article was "speculation" based on industry interviews. Nor will Sinclair confirm industry rumors that it is developing a three-wheel, single-seat vehicle.

The West Belfast auto plants, which once had 2,500 workers, closed last October shortly after John Z. De Lorean, the founder of the sports car concern, was arrested in the U.S. on cocaine-conspiracy charges. He is awaiting trial.

Sinclair also said that Sir Clive has held exploratory talks with Group Lotus, the British maker of Lotus sports cars, about making a personal investment in the concern. No further discussions are currently planned, Sinclair said.

Ed. - When it comes time to design the connection between the battery and motor, we strongly suggest to Uncle Clive that he not hire the genius who worked on the 16K connector for our computers. It would be very inconvenient for the electric car to lose its power every time it went over a bump.

TIMELINEZ

PUG NEWS

WELL, TIMELINEZ NOW HAS TWO ISSUES BEHIND IT. IMPROVEMENTS HAVE BEEN MADE AND WILL CONTINUE TO BE MADE IN BOTH THE FORMAT AND THE CONTENTS. THE MEMBERS OF THE PEINSULA USER'S GROUP ARE GLAD TO JOIN WITH THE OTHER GROUPS OF THE BAY AREA TO MAKE TIMELINEZ ONE OF THE LEADING TIMEX/SINCLAIR NEWSLETTERS IN THE COUNTRY. (POTENTIAL ADVERTISERS PLEASE TAKE NOTE.)

READERS MAY HAVE WONDERED WHO IS RESPONSIBLE FOR THE WELL WRITTEN SERIES ON Z80 A ASSEMBLY LANGUAGE PROGRAMMING WHICH IS NOW RUNNING IN TIMELINEZ. HE IS TOO MODEST TO INCLUDE MORE THAN HIS INITIALS, BUT I CAN CONFIRM THAT IT IS NONE OTHER THAN OUR OWN FRANK MOURA. THANKS FRANK, FOR AN EXCELLENT JOB. PUG IS PROUD OF YOU.

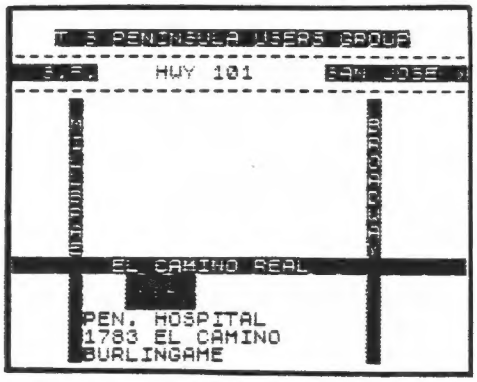
THANKS ALSO TO NEIL, KENDRIC AND BOB FOR THEIR INPUT TO TIMELINEZ FROM THE PENINSULA USERS GROUP. NOW HOW ABOUT THE REST OF YOU? WE REALLY NEED YOUR INPUT IF WE ARE GOING TO MAINTAIN THE QUALITY AND QUANTITY OF TIMELINEZ. IT TAKES A LOT OF COPY TO PRODUCE A MONTLY NEWSLETTER, BUT THERE IS CERTAINLY NO SHORTAGE OF INTERESTING SOFTWARE AND HARDWARE DISPLAYED AT OUR MEETINGS. WHY NOT WRITE AN ARTICLE AND SHARE YOUR IDEAS WITH THE REST OF THE BAY AREA. T/S ENTHUSIASTS?

O.K., I WILL GET OFF THE SOAPBOX AND ON TO OTHER MATTERS. WE ARE VERY ENTHUSIASTIC ABOUT THE "TELL TIMEX CONTEST". WITH SO MANY PRIZES BEING GIVEN OUT, THERE IS A GOOD CHANCE FOR YOUR ENTRY TO WIN. SAM BARRON OF TIMEX HAS BEEN VERY GENEROUS IN HIS SUPPORT OF THIS CONTEST AND WE THANK HIM FOR IT. MAYBE WE CAN COME UP WITH AN IDEA THAT WILL REALLY PUT TIMEX ON THE COMPUTER MAP.

ONE LAST REMINDER TO ALL THOSE WHO ARE ON OUR MAILING LIST, BUT HAVE NOT BEEN IN CONTACT WITH US FOR AWHILE. WE ARE SENDING YOU THIS ONE FINAL COMPLIMENTARY ISSUE OF THE NEWSLETTER IN THE HOPE THAT YOU ARE STILL INTERESTED IN THE GROUP. DUE TO FINANCIAL CONSIDERATIONS WE CAN NO LONGER SEND TIMELINEZ UNLESS WE HEAR FROM YOU.

SO LONG TILL NEXT TIME AND GOOD LUCK WITH YOUR COMPUTING.

GEO.



MEETINGS ARE HELD ON THE 3RD SUNDAY OF EACH MONTH. 2 P.M.
JULY 17TH
AUG. 21ST

NOTE WE HAVE BEEN ASKED NOT TO PARK IN THE VISITOR LOT. PLEASE USE THE LOTS SURROUNDING THE VISITOR LOT.

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FOR MORE INFORMATION CONTACT:

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SEND NEWSLETTER CONTRIBUTIONS:

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SAN FRANCISCO, CA. 94131
(415) 333-2231

SEE YOU AT THE NEXT MEETING

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The SBZUG meeting will be on July 26, 1983, at 7 p.m. in the Dysan Corporation Auditorium.

Dysan Corporation
5201 Patrick Henry Drive
Santa Clara, Ca.

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Ted Helderman
1121 Nottingham Place
San Jose, CA 95117
Phone: 408/241-5661
Day or Evening

Membership dues are $15 per year (make checks payable to SINCLINC) and mail to:

Paul D. Perrault
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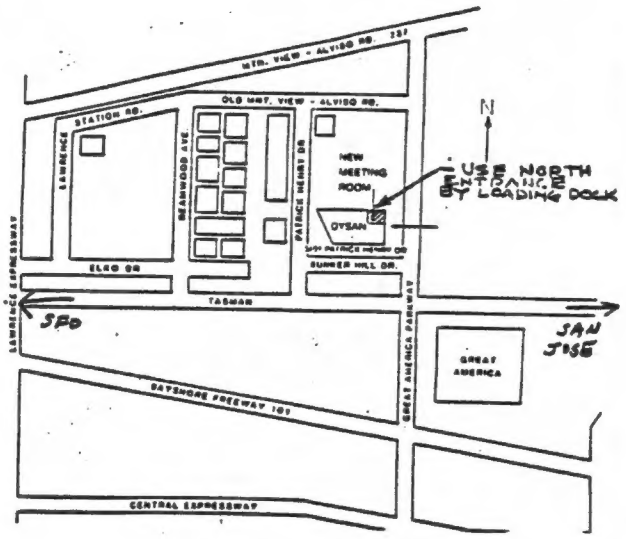

PAUL PERREAULT, THE PERSIDENT OF THE SOUTH BAY T/S USER GROUP, WAS UNABLE TO SUBMIT HIS COLUMN THIS MONTH.

TIMELINEZ

NEWSLETTER COORDINATOR: GEORGE MOCKRIDGE
EDITORS:
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PUG: FRANK MOURA
SBATSUG: TEDDY HELDERMAN

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